

IN THE SPECIFICATION

Please amend the specification as follows:

Please substitute the following paragraph for the paragraph starting at page 3, line 24 and ending at page 4, line 18.

In the view of the above object, in accordance with an aspect of the invention, there is provided a zoom lens comprising, in order from an object side to an image side, a first lens unit of negative refractive power, a second lens unit of positive refractive power, a third lens unit of negative refractive power, and a fourth lens unit of positive refractive power, wherein the first lens unit has a negative lens located on the most object side thereof, and the negative lens located on the most object side of the first lens unit satisfies the following conditions:

(a)  $35 < v11n < 65$ , and

(b) when  $35 < v11n \leq 52$ ,

$$-0.013 v11n + 2.19 < N11n < -0.005 v11n + 1.92,$$

when  $52 < v11n \leq 60$ ,

$$1.5 < N11n < -0.005 v11n + 1.92,$$

when  $60 < v11n < 65$ ,

$$1.5 < N11n < -0.022 v11n + 2.94,$$

where  $v11n$  is an Abbe number of a material of the negative lens located on the most object side of the first lens unit, and  $N11n$  is a refractive index of the material of the negative lens located on the most object side of the first lens unit.

Please substitute the following paragraph for the ~~paragraph~~ starting at page 4,  
line 19 and ending at page 5, line 5.

In the above zoom lens, the first lens unit has a second negative lens other than the negative lens located on the most object side thereof, and the second negative lens satisfies the following conditions:

(c)  $35 < v_{12n} < 65$ , and

(d) when  $35 < v_{12n} \leq 52$ ,

$$-0.013 v_{12n} + 2.19 < N_{12n} < -0.005 v_{12n} + 1.92,$$

when  $52 < v_{12n} \leq 60$ ,

$$1.5 < N_{12n} < -0.005 v_{12n} + 1.92,$$

when  $60 < v_{12n} < 65$ ,

$$1.5 < N_{12n} < -0.022 v_{12n} + 2.94,$$

where  $v_{12n}$  is an Abbe number of a material of the second negative lens of the first lens unit, and  $N_{12n}$  is a refractive index of the material of the second negative lens of the first lens unit.

Please substitute the following paragraph for the ~~paragraph~~ starting at page 7,  
line 15 and ending at page 8, line 8.

In accordance with another aspect of the invention, there is provided a zoom lens comprising, in order from an object side to an image side, a first lens unit of negative refractive power, a second lens unit of positive refractive power, and a third lens unit, wherein all said first to third lens units move during variation of magnification, the first lens unit has a negative lens located on the most object side thereof, and the negative lens located on the most object side of the first lens unit satisfies the following conditions:

(a)  $35 < v_{11n} < 65$ , and

(b) when  $35 < v_{11n} \leq 52$ ,

$$-0.013 v_{11n} + 2.19 < N_{11n} < -0.005 v_{11n} + 1.92,$$

when  $52 < v_{11n} \leq 60$ ,

$$1.5 < N_{11n} < -0.005 v_{11n} + 1.92,$$

when  $60 < v_{11n} < 65$ ,

$$1.5 < N_{11n} < -0.022 v_{11n} + 2.94,$$

where  $v_{11n}$  is an Abbe number of a material of the negative lens located on the most object side of the first lens unit, and  $N_{11n}$  is a refractive index of the material of the negative lens located on the most object side of the first lens unit.

Please substitute the following paragraph for the paragraph starting at page 20, line 5 and ending at page 20, line 24.

(A) The zoom lens according to the first embodiment, while having the above-mentioned basic construction, satisfies the following conditions (1), (2a), (2b) and (2c), or satisfies the following conditions (1) to (3):

(a)  $37 < v_{1n} < 65$ , ... (1)

(b) when  $35 < v_{1n} \leq 52$ ,

$$-0.013 v_{1n} + 2.19 < N_{1n} < -0.005 v_{1n} + 1.92, \quad \dots (2a)$$

when  $52 < v_{1n} \leq 60$ ,

$$1.5 < N_{1n} < -0.005 v_{1n} + 1.92, \quad \dots (2b)$$

when  $60 < v_{1n} < 65$ ,

$$1.5 < N_{1n} < -0.022 v_{1n} + 2.94, \quad \dots (2c)$$

(c)  $0.9 < |f_l/f_w| < 1.8$  ... (3)

where  $v_{1n}$  is an Abbe number of a material of a negative lens included in the first lens unit,  $N_{1n}$  is a refractive index of the material of the negative lens included in the first lens unit,  $f_l$  is a focal length of the first lens unit  $L_1$ , and  $f_w$  is a focal length of the entire zoom lens in the wide-angle end.

Please substitute the following paragraph for the paragraph starting at page 23, line 2 and ending at page 23, line 15.

In the first embodiment, desirably, it is preferred that the conditions (1) to (3) are limited to the following ranges:

(a)'  $37 < v_{1n} < 65$ , ... (1)'

(b)' when  $35 < v_{1n} \leq 52$ ,

$-0.008 v_{1n} + 2.02 < N_{1n} < -0.005 v_{1n} + 1.90$ , ... (2a)'

when  $52 < v_{1n} \leq 60$ ,

$-0.008 v_{1n} + 2.02 < N_{1n} < -0.005 v_{1n} + 1.92$ , ... (2b)'

when  $60 < v_{1n} < 65$ ,

$-0.008 v_{1n} + 2.02 < N_{1n} < -0.022 v_{1n} + 2.94$ , ... (2c)'

(c)'  $1.15 < |f_l/f_w| < 1.45$  ... (3)'

# IN THE ABSTRACT

Please amend the Abstract as follows:

A4  
A zoom lens including, in order from an object side to an image side, a first lens unit L1 of negative refractive power, a second lens unit L2 of positive refractive power, a third lens unit L3 of negative refractive power, and a fourth lens unit L4 of positive refractive power, wherein, during variation of magnification from a wide-angle end to a telephoto end, L1 moves with a locus convex toward the image side, L2 moves toward the object side in such a way as to decrease a separation between L1 and L2, L3 moves toward the object side in such a way as to increase a separation between L2 and L3, and L4 moves toward the object side in such a way as to decrease a separation between L3 and L4, and wherein the Abbe number and refractive index of a negative lens included in L1 are appropriately set.

#### IN THE CLAIMS

Please amend Claims 1 and 2 and add Claims 61 through 71 as follows. A marked-up copy of Claims 1 and 2, showing the changes made thereto, is attached. Note that all the claims currently pending in this application have been reproduced below for the Examiner's convenience.

A7  
1. (Amended) A zoom lens comprising, in order from an object side to an image side, a first lens unit of negative refractive power, a second lens unit of positive refractive power, a third lens unit of negative refractive power, and a fourth lens unit of positive refractive power, wherein said first lens unit has a negative lens located on the most object side thereof, and said negative lens located on the most object side of said first lens unit satisfies the following conditions:

(a)  $35 < v_{11n} < 65$ , and

(b) when  $35 < v_{11n} \leq 52$ ,

$$-0.013 v_{11n} + 2.19 < N_{11n} < -0.005 v_{11n} + 1.92,$$

when  $52 < v_{11n} \leq 60$ ,

$$1.5 < N_{11n} < -0.005 v_{11n} + 1.92,$$

when  $60 < v_{11n} < 65$ ,

$$1.5 < N_{11n} < -0.022 v_{11n} + 2.94,$$

where  $v_{11n}$  is an Abbe number of a material of said negative lens located on the most object side of said first lens unit, and  $N_{11n}$  is a refractive index of the material of said negative lens located on the most object side of said first lens unit,

wherein said first lens unit has a second negative lens other than said negative lens located on the most object side thereof, and said second negative lens satisfies the following conditions:

(c)  $35 < v_{12n} < 65$ , and

(d) when  $35 < v_{12n} \leq 52$ ,

$$-0.013 v_{12n} + 2.19 < N_{12n} < -0.005 v_{12n} + 1.92,$$

when  $52 < v_{12n} \leq 60$ ,

$$1.5 < N_{12n} < -0.005 v_{12n} + 1.92,$$

when  $60 < v_{12n} < 65$ ,

$$1.5 < N_{12n} < -0.022 v_{12n} + 2.94,$$

where  $v_{12n}$  is an Abbe number of a material of said second negative lens of said first lens unit, and  $N_{12n}$  is a refractive index of the material of said second negative lens of said first lens unit, and

wherein the separation between adjacent lens units varies during zooming.

2. (Amended) A zoom lens according to claim 63, wherein said first lens unit has a second negative lens other than said negative lens located on the most object side thereof, and said second negative lens satisfies the following conditions:

(c)  $35 < v_{12n} < 65$ , and

(d) when  $35 < v_{12n} \leq 52$ ,

$$-0.013 v_{12n} + 2.19 < N_{12n} < -0.005 v_{12n} + 1.92,$$

when  $52 < v_{12n} \leq 60$ ,

$$1.5 < N_{12n} < -0.005 v_{12n} + 1.92,$$

when  $60 < v_{12n} < 65$ ,

$$1.5 < N_{12n} < -0.022 v_{12n} + 2.94,$$

where  $v_{12n}$  is an Abbe number of a material of said second negative lens of said first lens unit, and  $N_{12n}$  is a refractive index of the material of said second negative lens of said first lens unit.

3. (Unamended) A zoom lens according to claim 1, wherein said zoom lens becomes, at a telephoto end, a telephoto type in which a plurality of lens units are divided into a lens group on the object side composed of at least one lens unit having a positive refractive power and a lens group on the image side composed of at least one lens unit having a negative refractive power.

4. (Unamended) A zoom lens according to claim 1, wherein, during variation of magnification from a wide-angle end to a telephoto end, said first lens unit moves with a locus convex toward the image side, said second lens unit moves toward the object side in such a way as to decrease a separation between said first lens unit and said second lens unit, said

third lens unit moves toward the object side in such a way as to increase a separation between said second lens unit and said third lens unit, and said fourth lens unit moves toward the object side in such a way as to decrease a separation between said third lens unit and said fourth lens unit.

5. (Unamended) A zoom lens according to claim 1, wherein said zoom lens satisfies the following condition:

$$0.9 < |f_1/f_w| < 1.8$$

where  $f_1$  is a focal length of said first lens unit, and  $f_w$  is a focal length of said zoom lens in a wide-angle end.

6. (Unamended) A zoom lens according to claim 1, wherein said first lens unit comprises, in order from the object side to the image side, a negative lens of meniscus form having a convex surface facing the object side, a negative lens, and a positive lens of meniscus form having a convex surface facing the object side.

7. (Unamended) A zoom lens according to claim 1, wherein said second lens unit and said fourth lens unit move in unison with each other during variation of magnification.

8. (Unamended) A zoom lens according to claim 1, wherein said zoom lens satisfies the following conditions:

$$0.65 < f_2/f_w < 1.3$$



$$1.2 < |f_3/f_w| < 3.4$$

where  $f_2$  and  $f_3$  are focal lengths of said second lens unit and said third lens unit, respectively, and  $f_w$  is a focal length of said zoom lens in a wide-angle end.

9. (Unamended) A zoom lens according to claim 1, wherein said zoom lens consists of said first to fourth lens units, and satisfies the following condition:

$$2.1 < f_4/f_w < 8.5$$

where  $f_4$  is a focal length of said fourth lens unit, and  $f_w$  is a focal length of said zoom lens in a wide-angle end.

10. (Unamended) A zoom lens according to claim 1, wherein said second lens unit comprises two positive lenses and one negative lens.

11. (Unamended) A zoom lens according to claim 1, wherein said third lens unit comprises a cemented lens composed of a negative lens and a positive lens.

12. (Unamended) A zoom lens according to claim 1, wherein said fourth lens unit comprises a negative lens and a positive lens, and has at least one aspheric surface.

13. (Unamended) A zoom lens according to claim 1, wherein said second lens unit comprises one positive lens and a positive cemented lens composed of a negative lens and a positive lens.

14. (Unamended) A zoom lens according to claim 1, wherein said fourth lens unit has a plastic aspheric lens.

15. (Unamended) A zoom lens according to claim 1, wherein said second lens unit comprises one positive lens and a positive cemented lens composed of a negative lens and a positive lens, said third lens unit comprises a negative lens and a positive lens, and said fourth lens unit comprises a negative lens and a positive lens, and has a plastic aspheric lens.

16. (Unamended) An image pickup apparatus comprising a zoom lens according to claim 1, a photosensitive member, and means for supporting said zoom lens and said photosensitive member.

17. (Unamended) An image projection apparatus comprising a zoom lens according to claim 1, a light source, and an image forming element, and arranged to project an image.

18. (Unamended) A zoom lens comprising, in order from an object side to an image side, a first lens unit of negative refractive power, a second lens unit of positive refractive power, and a third lens unit, wherein all said first to third lens units move during variation of magnification, said first lens unit has a negative lens located on the most object side thereof, and said negative lens located on the most object side of said first lens unit satisfies the following conditions:

$$(a) \ 35 < v11n < 65, \text{ and}$$

(b) when  $35 < v_{11n} < 52$ ,

$$-0.013 v_{11n} + 2.19 < N_{11n} < -0.005 v_{11n} + 1.92,$$

when  $52 < v_{11n} < 60$ ,

$$1.5 < N_{11n} < -0.005 v_{11n} + 1.92,$$

when  $60 < v_{11n} < 65$ ,

$$1.5 < N_{11n} < -0.022 v_{11n} + 2.94,$$

where  $v_{11n}$  is an Abbe number of a material of said negative lens located on the most object side of said first lens unit, and  $N_{11n}$  is a refractive index of the material of said negative lens located on the most object side of said first lens unit.

19. (Unamended) A zoom lens according to claim 18, wherein said first lens unit has a second negative lens other than said negative lens located on the most object side thereof, and said second negative lens satisfies the following conditions:

(c)  $35 < v_{12n} < 65$ , and

(d) when  $35 < v_{12n} < 52$ ,

$$-0.013 v_{12n} + 2.19 < N_{12n} < -0.005 v_{12n} + 1.92,$$

when  $52 < v_{12n} < 60$ ,

$$1.5 < N_{12n} < -0.005 v_{12n} + 1.92,$$

when  $60 < v_{12n} < 65$ ,

$$1.5 < N_{12n} < -0.022 v_{12n} + 2.94,$$

where  $v_{12n}$  is an Abbe number of a material of said second negative lens of said first lens unit, and  $N_{12n}$  is a refractive index of the material of said second negative lens of said first lens unit.

20. (Unamended) A zoom lens according to claim 18, wherein said third lens unit has a negative refractive power.

21. (Unamended) A zoom lens according to claim 18, wherein said zoom lens becomes, at a telephoto end, a telephoto type in which a plurality of lens units are divided into a lens group on the object side composed of at least one lens unit having a positive refractive power and a lens group on the image side composed of at least one lens unit having a negative refractive power.

22. (Unamended) A zoom lens according to claim 18, wherein said zoom lens satisfies the following condition:

$$0.9 < |f_1/f_w| < 1.8$$

where  $f_1$  is a focal length of said first lens unit, and  $f_w$  is a focal length of said zoom lens in a wide-angle end.

23. (Unamended) A zoom lens according to claim 18, wherein said first lens unit comprises, in order from the object side to the image side, a negative lens of meniscus form having a convex surface facing the object side, a negative lens, and a positive lens of meniscus form having a convex surface facing the object side.

24. (Unamended) A zoom lens according to claim 18, wherein said second lens unit comprises two positive lenses and one negative lens.

25. (Unamended) A zoom lens according to claim 18, wherein said third lens unit comprises a cemented lens composed of a negative lens and a positive lens.

26. (Unamended) A zoom lens according to claim 18, wherein said second lens unit comprises one positive lens and a positive cemented lens composed of a negative lens and a positive lens.

27. (Unamended) An image pickup apparatus comprising a zoom lens according to claim 18, a photosensitive member, and means for supporting said zoom lens and said photosensitive member.

28. (Unamended) An image projection apparatus comprising a zoom lens according to claim 18, a light source, and an image forming element, and arranged to project an image.

29. (Unamended) A zoom lens comprising, in order from an object side to an image side, a first lens unit of negative refractive power and a second lens unit of positive refractive power, said second lens unit of positive refractive power consisting of two positive lenses and one negative lens, wherein the following conditions are satisfied:

$$1.1 < |f1/fw| < 1.4$$

$$0.8 < |f2/fw| < 1.1$$

where  $f1$  and  $f2$  are focal lengths of said first lens unit and said second lens unit, respectively, and  $fw$  is a focal length of said zoom lens in a wide-angle end.

30. (Unamended) A zoom lens according to claim 29, wherein said zoom lens becomes, at a telephoto end, a telephoto type in which a plurality of lens units are divided into a lens group on the object side composed of at least one lens unit having a positive refractive power and a lens group on the image side composed of at least one lens unit having a negative refractive power.

31. (Unamended) A zoom lens according to claim 29, wherein said first lens unit comprises, in order from the object side to the image side, a negative lens of meniscus form having a convex surface facing the object side, a negative lens, and a positive lens of meniscus form having a convex surface facing the object side.

32. (Unamended) A zoom lens according to claim 29, wherein one of said two positive lenses and said one negative lens in said second lens unit are cemented together to form a cemented lens, and the following condition is satisfied:

$$20 < v_{2p} - v_{2n}$$

where  $v_{2p}$  is an Abbe number of a material of said positive lens of said cemented lens of said second lens unit, and  $v_{2n}$  is an Abbe number of a material of said negative lens of said cemented lens of said second lens unit.

33. (Unamended) An image pickup apparatus comprising a zoom lens according to claim 29, a photosensitive member, and means for supporting said zoom lens and said photosensitive member.

34. (Unamended) An image projection apparatus comprising a zoom lens according to claim 29, a light source, and an image forming element, and arranged to project an image.

35. (Unamended) A zoom lens comprising, in order from an object side to an image side, a first lens unit of negative refractive power, a second lens unit of positive refractive power, and a third lens unit of negative refractive power, wherein the following conditions are satisfied:

$$1.1 < |f1/fw| < 1.4$$

$$0.8 < |f2/fw| < 1.1$$

where f1 and f2 are focal lengths of said first lens unit and said second lens unit, respectively, and fw is a focal length of said zoom lens in a wide-angle end.

36. (Unamended) A zoom lens according to claim 35, wherein said zoom lens becomes, at a telephoto end, a telephoto type in which a plurality of lens units are divided into a lens group on the object side composed of at least one lens unit having a positive refractive power and a lens group on the image side composed of at least one lens unit having a negative refractive power.

37. (Unamended) A zoom lens according to claim 35, wherein said first lens unit comprises, in order from the object side to the image side, a negative lens of meniscus form having a convex surface facing the object side, a negative lens, and a positive lens of meniscus form having a convex surface facing the object side.

38. (Unamended) A zoom lens according to claim 35, wherein a stop is disposed adjacent to said third lens unit, said stop moving in unison with said third lens unit.

39. (Unamended) A zoom lens according to claim 38, wherein said stop is disposed on the object side of said third lens unit.

40. (Unamended) A zoom lens according to claim 35, wherein said third lens unit comprises one positive lens and one negative lens, and the following condition is further satisfied:

$$1.5 < |f_3/f_w| < 3.0$$

where  $f_3$  is a focal length of said third lens unit.

41. (Unamended) A zoom lens according to claim 35, wherein said second lens unit has a cemented lens composed of a negative lens and a positive lens, and the following condition is further satisfied:

$$20 < v_{2p} - v_{2n}$$

where  $v_{2p}$  is an Abbe number of a material of said positive lens of said cemented lens of said second lens unit, and  $v_{2n}$  is an Abbe number of a material of said negative lens of said cemented lens of said second lens unit.

42. (Unamended) A zoom lens according to claim 35, wherein said third lens unit has a cemented lens composed of a negative lens and a positive lens, and the following conditions are further satisfied:



$$4.0 < v_{3n} - v_{3p} < 12.0$$

$$0.05 < N_{3p} - N_{3n} < 0.20$$

where  $v_{3n}$  is an Abbe number of a material of said negative lens of said cemented lens of said third lens unit,  $v_{3p}$  is an Abbe number of a material of said positive lens of said cemented lens of said third lens unit,  $N_{3p}$  is a refractive index of the material of said positive lens of said cemented lens of said third lens unit, and  $N_{3n}$  is a refractive index of the material of said negative lens of said cemented lens of said third lens unit.

43. (Unamended) An image pickup apparatus comprising a zoom lens according to claim 35, a photosensitive member, and means for supporting said zoom lens and said photosensitive member.

44. (Unamended) An image projection apparatus comprising a zoom lens according to claim 35, a light source, and an image forming element, and arranged to project an image.

45. (Unamended) A zoom lens comprising, in order from an object side to an image side, a first lens unit of negative refractive power, a second lens unit of positive refractive power, a third lens unit of negative refractive power, and a fourth lens unit of positive refractive power, wherein the following conditions are satisfied:

$$1.1 < |f_1/f_w| < 1.4$$

$$0.8 < |f_2/f_w| < 1.1$$

where  $f_1$  and  $f_2$  are focal lengths of said first lens unit and said second lens unit, respectively, and  $f_w$  is a focal length of said zoom lens in a wide-angle end.

46. (Unamended) A zoom lens according to claim 45, wherein said zoom lens becomes, at a telephoto end, a telephoto type in which a plurality of lens units are divided into a lens group on the object side composed of at least one lens unit having a positive refractive power and a lens group on the image side composed of at least one lens unit having a negative refractive power.

47. (Unamended) A zoom lens according to claim 45, wherein, during variation of magnification from a wide-angle end to a telephoto end, said first lens unit moves with a locus convex toward the image side, said second lens unit moves toward the object side in such a way as to decrease a separation between said first lens unit and said second lens unit, said third lens unit moves toward the object side in such a way as to increase a separation between said second lens unit and said third lens unit, and said fourth lens unit moves toward the object side in such a way as to decrease a separation between said third lens unit and said fourth lens unit.

48. (Unamended) A zoom lens according to claim 45, wherein said first lens unit comprises, in order from the object side to the image side, a negative lens of meniscus form having a convex surface facing the object side, a negative lens, and a positive lens of meniscus form having a convex surface facing the object side.

49. (Unamended) A zoom lens according to claim 45, wherein a stop is disposed adjacent to said third lens unit, said stop moving in unison with said third lens unit.

50. (Unamended) A zoom lens according to claim 49, wherein said stop is disposed on the object side of said third lens unit.

51. (Unamended) A zoom lens according to claim 45, wherein said second lens unit and said fourth lens unit move in unison with each other during variation of magnification.

52. (Unamended) A zoom lens according to claim 45, wherein said third lens unit comprises one positive lens and one negative lens, and the following condition is further satisfied:

$$1.5 < |f_3/f_w| < 3.0$$

where  $f_3$  is a focal length of said third lens unit.

53. (Unamended) A zoom lens according to claim 45, wherein said zoom lens consists of said first to fourth lens units, said fourth lens unit comprises one positive lens and one negative lens, and the following condition is further satisfied:

$$2.5 < |f_4/f_w| < 8.0$$

where  $f_4$  is a focal length of said fourth lens unit.

54. (Unamended) A zoom lens according to claim 45, wherein said second lens unit has a cemented lens composed of a negative lens and a positive lens, and the following condition is further satisfied:

$$20 < v_{2p} - v_{2n}$$

where  $v_{2p}$  is an Abbe number of a material of said positive lens of said cemented lens of said second lens unit, and  $v_{2n}$  is an Abbe number of a material of said negative lens of said cemented lens of said second lens unit.

55. (Unamended) A zoom lens according to claim 45, wherein said third lens unit has a cemented lens composed of a negative lens and a positive lens, and the following conditions are further satisfied:

$$4.0 < v_{3n} - v_{3p} < 12.0$$

$$0.05 < N_{3p} - N_{3n} < 0.20$$

where  $v_{3n}$  is an Abbe number of a material of said negative lens of said cemented lens of said third lens unit,  $v_{3p}$  is an Abbe number of a material of said positive lens of said cemented lens of said third lens unit,  $N_{3p}$  is a refractive index of the material of said positive lens of said cemented lens of said third lens unit, and  $N_{3n}$  is a refractive index of the material of said negative lens of said cemented lens of said third lens unit.

56. (Unamended) A zoom lens according to claim 45, wherein said fourth lens unit has at least one aspheric surface.

57. (Unamended) A zoom lens according to claim 45, wherein said fourth lens unit has a plastic aspheric lens.

58. (Unamended) An image pickup apparatus comprising a zoom lens according to claim 45, a photosensitive member, and means for supporting said zoom lens and said photosensitive member.

59. (Unamended) An image protection apparatus comprising a zoom lens according to claim 45, a light source, and an image forming element, and arranged to project an image.

60. (Unamended) A zoom lens according to claim 1 or 18, wherein the following conditions are satisfied:

$$1.1 < |f1/fw| < 1.4$$

$$0.8 < |f2/fw| < 1.1$$

where f1 and f2 are focal lengths of said first lens unit and said second lens unit, respectively, and fw is a focal length of said zoom lens in a wide-angle end.

--61. (New) A zoom lens comprising, in order from an object side to an image side, a first lens unit of negative refractive power, a second lens unit of positive refractive power, a third lens unit of negative refractive power, and a fourth lens unit of positive refractive power, wherein said first lens unit has a negative lens located on the most object side thereof, and

said negative lens located on the most object side of said first lens unit satisfies the following conditions:

- (a)  $35 < v_{11n} < 65$ , and
- (b) when  $35 < v_{11n} \leq 52$ ,  
 $-0.013 v_{11n} + 2.19 < N_{11n} < -0.005 v_{11n} + 1.92$ ,  
when  $52 < v_{11n} \leq 60$ ,  
 $1.5 < N_{11n} < -0.005 v_{11n} + 1.92$ ,  
when  $60 < v_{11n} < 65$ ,  
 $1.5 < N_{11n} < -0.022 v_{11n} + 2.94$ ,

where  $v_{11n}$  is an Abbe number of a material of said negative lens located on the most object side of said first lens unit, and  $N_{11n}$  is a refractive index of the material of said negative lens located on the most object side of said first lens unit,

wherein said second lens unit and said fourth lens unit move in unison with each other during variation of magnification, and

wherein the separation between adjacent lens units varies during zooming.

62. (New) A zoom lens comprising, in order from an object side to an image side, a first lens unit of negative refractive power, a second lens unit of positive refractive power, a third lens unit of negative refractive power, and a fourth lens unit of positive refractive power, wherein said first lens unit has a negative lens located on the most object side thereof, and said negative lens located on the most object side of said first lens unit satisfies the following conditions:

- (a)  $35 < v_{11n} < 65$ , and

(b) when  $35 < v_{11n} \leq 52$ ,

$$-0.013 v_{11n} + 2.19 < N_{11n} < -0.005 v_{11n} + 1.92,$$

when  $52 < v_{11n} \leq 60$ ,

$$1.5 < N_{11n} < -0.005 v_{11n} + 1.92,$$

when  $60 < v_{11n} < 65$ ,

$$1.5 < N_{11n} < -0.022 v_{11n} + 2.94,$$

where  $v_{11n}$  is an Abbe number of a material of said negative lens located on the most object side of said first lens unit, and  $N_{11n}$  is a refractive index of the material of said negative lens located on the most object side of said first lens unit,

wherein said fourth lens unit comprises a negative lens and a positive lens, and has at least one aspheric surface, and

wherein the separation between adjacent lens units varies during zooming.

63. (New) A zoom lens comprising, in order from an object side to an image side, a first lens unit of negative refractive power, a second lens unit of positive refractive power, a third lens unit of negative refractive power, and a fourth lens unit of positive refractive power, wherein said first lens unit has a negative lens located on the most object side thereof, and said negative lens located on the most object side of said first lens unit satisfies the following conditions:

(a)  $35 < v_{11n} < 65$ , and

(b) when  $35 < v_{11n} \leq 52$ ,

$$-0.013 v_{11n} + 2.19 < N_{11n} < -0.005 v_{11n} + 1.92,$$

when  $52 < v_{11n} \leq 60$ ,

$$1.5 < N_{11n} < -0.005 v_{11n} + 1.92,$$

$$\text{when } 60 < v_{11n} < 65,$$

$$1.5 < N_{11n} < -0.022 v_{11n} + 2.94,$$

where  $v_{11n}$  is an Abbe number of a material of said negative lens located on the most object side of said first lens unit, and  $N_{11n}$  is a refractive index of the material of said negative lens located on the most object side of said first lens unit,

wherein said fourth lens unit has a plastic aspheric lens, and

wherein the separation between adjacent lens units varies during zooming.

64. (New) A zoom lens comprising, in order from an object side to an image side, a first lens unit of negative refractive power, a second lens unit of positive refractive power, a third lens unit of negative refractive power, and a fourth lens unit of positive refractive power, wherein said first lens unit has a negative lens located on the most object side thereof, and said negative lens located on the most object side of said first lens unit satisfies the following conditions:

(a)  $35 < v_{11n} < 65$ , and

(b)  $\text{when } 35 < v_{11n} \leq 52$ ,

$$-0.013 v_{11n} + 2.19 < N_{11n} < -0.005 v_{11n} + 1.92,$$

$$\text{when } 52 < v_{11n} \leq 60,$$

$$1.5 < N_{11n} < -0.005 v_{11n} + 1.92,$$

$$\text{when } 60 < v_{11n} < 65,$$

$$1.5 < N_{11n} < -0.022 v_{11n} + 2.94,$$



where  $v_{11n}$  is an Abbe number of a material of said negative lens located on the most object side of said first lens unit, and  $N_{11n}$  is a refractive index of the material of said negative lens located on the most object side of said first lens unit,

wherein said second lens unit comprises one positive lens and a positive cemented lens composed of a negative lens and a positive lens, said third lens unit comprises a negative lens and a positive lens, and said fourth lens unit comprises a negative lens and a positive lens, and has a plastic aspheric lens, and

wherein the separation between adjacent lens units varies during zooming.

65. (New) A zoom lens comprising, in order from an object side to an image side, a first lens unit of negative refractive power, a second lens unit of positive refractive power, a third lens unit of negative refractive power, and a fourth lens unit of positive refractive power, wherein said first lens unit has a negative lens located on the most object side thereof, and said negative lens located on the most object side of said first lens unit satisfies the following conditions:

(a)  $35 < v_{11n} < 65$ , and

(b) when  $35 < v_{11n} \leq 52$ ,

$$-0.013 v_{11n} + 2.19 < N_{11n} < -0.005 v_{11n} + 1.92,$$

when  $52 < v_{11n} \leq 60$ ,

$$1.5 < N_{11n} < -0.005 v_{11n} + 1.92,$$

when  $60 < v_{11n} < 65$ ,

$$1.5 < N_{11n} < -0.022 v_{11n} + 2.94,$$

where  $v_{11n}$  is an Abbe number of a material of said negative lens located on the most object side of said first lens unit, and  $N_{11n}$  is a refractive index of the material of said negative lens located on the most object side of said first lens unit,

wherein said first lens unit has two negative lenses at the most object side, and moves during variation of magnification, and

wherein the separation between adjacent lens units varies during zooming.

66. (New) A zoom lens comprising, in order from an object side to an image side, a first lens unit of negative refractive power, a second lens unit of positive refractive power, a third lens unit of negative refractive power, and a fourth lens unit of positive refractive power, wherein said first lens unit has a negative lens located on the most object side thereof, and said negative lens located on the most object side of said first lens unit satisfies the following conditions:

(a)  $35 < v_{11n} < 65$ , and

(b) when  $35 < v_{11n} \leq 52$ ,

$$-0.013 v_{11n} + 2.19 < N_{11n} < -0.005 v_{11n} + 1.92,$$

when  $52 < v_{11n} \leq 60$ ,

$$1.5 < N_{11n} < -0.005 v_{11n} + 1.92,$$

when  $60 < v_{11n} < 65$ ,

$$1.5 < N_{11n} < -0.022 v_{11n} + 2.94,$$

where  $v_{11n}$  is an Abbe number of a material of said negative lens located on the most object side of said first lens unit, and  $N_{11n}$  is a refractive index of the material of said negative lens located on the most object side of said first lens unit,

wherein said first lens unit comprises three lenses including two negative lenses at the most object side, and

wherein the separation between adjacent lens units varies during zooming.

67. (New) A zoom lens according to Claim 5, wherein  $1.2 < |f_1/f_w| < 1.4$ .

68. (New) A zoom lens according to Claim 8, wherein  $0.9 < f_2/f_w < 1.0$ .

69. (New) A zoom lens according to Claim 1, wherein the following conditions are satisfied:

(a)  $37 < v_{1n} < 65$ , and

(b) when  $35 < v_{1n} \leq 52$ ,  $-0.008 v_{1n} + 2.02 < N_{1n} < -0.005 v_{1n} + 1.90$

when  $52 < v_{1n} \leq 60$ ,  $-0.008 v_{1n} + 2.02 < N_{1n} < -0.005 v_{1n} + 1.92$

when  $60 < v_{1n} < 65$ ,  $-0.008 v_{1n} + 2.02 < N_{1n} < -0.022 v_{1n} + 2.94$ .

70. (New) A zoom lens according to Claim 69, wherein

$$1.15 < |f_1/f_2| < 1.45$$

where  $f_1$  is the focal length of said first lens unit and  $f_2$  is the focal length of said second lens unit.

71. (New) A zoom lens according to Claim 1, wherein the following conditions are satisfied:

$$0.84 < f_2/f_w < 1.1$$